



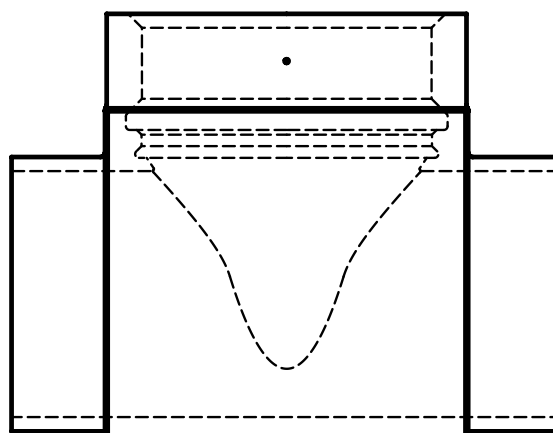
Installation instructions
Welding adapter
for units with Aseptoflex Vario adaptation

UK

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1 Preliminary note

1.1 Symbols used

- Instructions
- > Reaction, result
- [...] Designation of keys, buttons or indications
- Cross-reference
-  Important note
Non-compliance may result in malfunction or interference
-  Information
Supplementary note

2 Safety instructions

- Read this document before setting up the product and keep it during the entire service life.
- The product must be suitable for the corresponding applications and environmental conditions without any restrictions.
- Only use the product for its intended purpose
(→ 3 Functions and features)
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property may occur.
- The manufacturer assumes no liability or warranty for any consequences caused by tampering with the product or incorrect use by the operator.
- Installation, set-up, operation and maintenance of the product must be carried out by qualified personnel authorised by the machine operator.
- The welding operation must be carried out by authorised personnel.
It must be carried out carefully and according to state-of-the-art technology.
- During the welding process, ensure sufficient fume extraction.

3 Functions and features

The inline housing allows installation of sensors with Aseptoflex Vario adaption in pipe systems. Using this ensures a hygienic integration of the sensor. At the same time, the required welding operation is reduced to orbital welding at the two pipe ends.



The sensor to be mounted is flush with the inner wall of the pipe, which makes it fit for drainage. Vertical installation of the sensor into a horizontal pipe is possible. The medium flows directly across the sensor surface, which guarantees ideal cleaning conditions in accordance with standardised CIP conditions.



Installation of a pressure sensor: The small recess of the ceramic measuring cell inside the sensor must be taken into consideration if the sensor is installed from below into a horizontal pipe.



Installation of sensors with probe:
In order to prevent malfunction or damage, the probe must be shorter than the internal pipe diameter!

Note:

- The available pipe cross-section is restricted by the probe of the installed sensor.
- Observe minimum distances from probe tip to opposite walls
→ Operating instructions of the installed unit.



Pressure Equipment Directive (PED): The inline adapter complies with the Pressure Equipment Directive and is designed and manufactured for group 2 fluids in accordance with the sound engineering practice.

4 Installation

4.1 Basics

- The inline housing can be welded into pipes or provided with connection fittings.



During the installation or the welding process, the experience of qualified staff has priority. Procedures deviating from these instructions are permissible.

(DIN EN ISO 3834-1 to -6 and DIN FB CEN ISO / TR3834-6)



The pipe must correspond with the wall thickness and the diameter of the two pipe connections on the inline housing (DIN 11866).



Recommendation:

If the TIG method is applied → make reference to EHEDG DOC 35

"Hygienic welding of stainless steel tubing in the food processing industry".

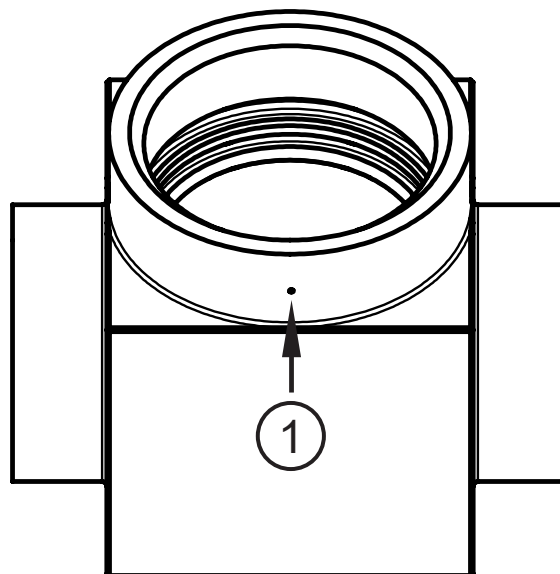


The inline housing may not deform.



Recommendation:

- Use a welding mandrel for optimum heat dissipation, order no. E30452.



- Marking (1) indicates the direction of the sensor display. Ensure correct alignment of the housing.
- Prepare the pipe ends for orbital welding.
- Ensure rectangularity, freedom from burrs and chamfers.

- ▶ The inline housing and its surfaces must be free from any kind of soiling and damage.
- ▶ Choose welding materials that are appropriate for the material of the adapter and the pipe.
- ▶ First, weld one side of the inline housing to a pipe, then weld the other side to the other pipe.

4.2 Forming



Welding with stainless steel:

The welding material may not come into contact with oxygen during the welding process.

- ▶ Rinse the inside of the pipe with forming gas.
- ▶ Seal the pipe upstream and downstream of the weld seam using an end cap.
- ▶ Connect feed line for inert gas to the pipe.
- ▶ Bore holes into the opposite side (pipe seal), so that the gas can escape.
- ▶ Ensure emission of gas with the required volume flow.



The forming gas may not produce any pressure inside the pipe.



The forming gas must be suitable for the applied welding method: TIG; MIG; MAG.

4.3 Tack welding

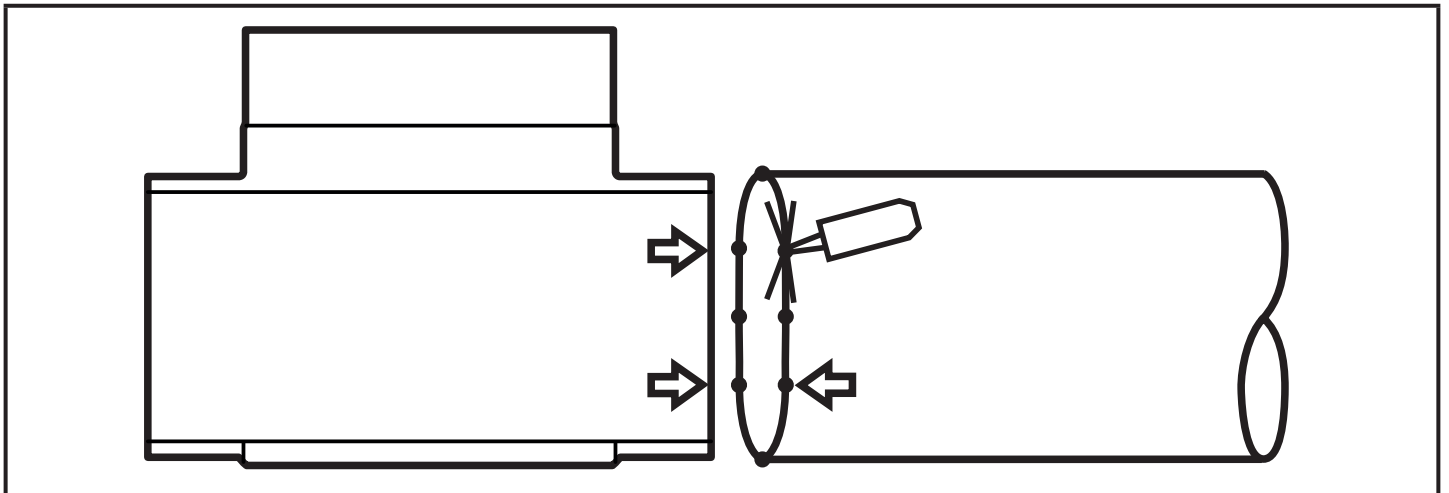
- ▶ Ensure plane-parallel alignment of the pipe end, perpendicular to the axis.
- ▶ Clamp the inline housing and the pipe against each other using an appropriate mounting solution.
- ▶ During welding and the following cooling phase the sensor must not be mounted in the adapter.



Using forming gas is recommended during the tack welding process.

- ▶ Add weld tacks between the inline housing and the pipe ends. Apply each new tack on the opposite side of the former, on the inside and the outside of the pipe.
- > Apply tack welds at regular intervals around the pipe.

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Recommendation:

Apply at least 8 tacks in order to prevent damage and torsion of the inline housing during the welding process.

4.4 Welding operation



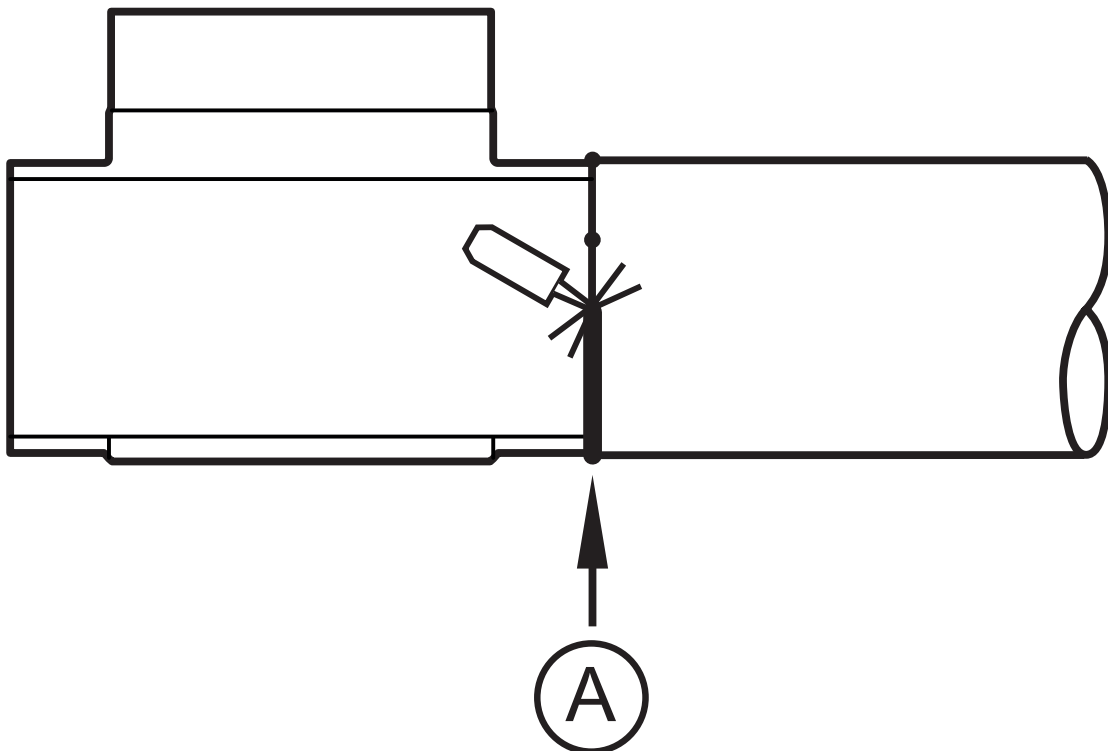
- The power of the welding device must be adapted to the thickness of the wall.
- In case of hygienic requirements, take the appropriate measures to obtain a hygienic weld seam, in particular:
 - choose the suitable welding method
 - choose the suitable welding parameters
 - Align pipe ends accurately to avoid gaps or linear misalignment, etc..
- Avoid overheating between the weld seams.
- Avoid undercuts (hygienic areas) → EHEDG DOC 35.

- ▶ During welding and the following cooling phase, the sensor must not be mounted in the adapter.
- ▶ Apply weld seams between the weld tacks. Add each new seam on the opposite side of the former.

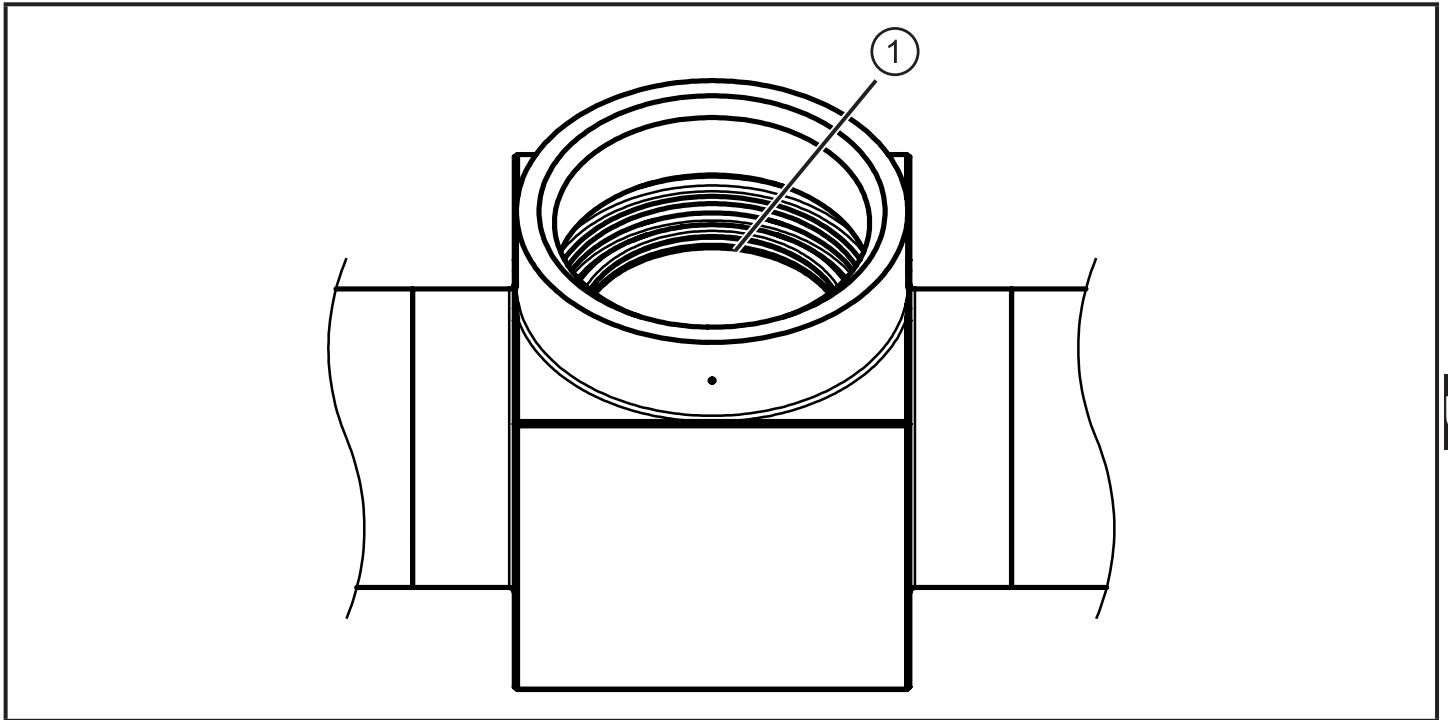


Recommendation:

Start welding at the lowest point (A).



- ▶ Do not damage the sealing edge of the adapter (number 1 in the following drawing) with weld spatter or the like.



1: sealing edge

4.5 After welding

- ▶ Let the adapter cool down.
 - ▶ If used: remove the welding mandrel.
 - ▶ Check the quality of the weld seam. It must meet the applicable requirements for a hygienic weld seam, in particular:
 - full weld penetration
 - no gaps / cracks / porosities / tarnish
 - no increased surface roughness
 - no protruding outwards
 - no sagging inwards
 - no inclusions
 - ▶ The thread and sealing edge must be free from welding slag.
- !** If the sealing edge of the inline adapter is damaged, the adapter can no longer be used
- ▶ Replacing the inline adapter.

4.6 Installing the sensor



A lubricating paste is required to install the sensor. It must be suitable and approved for the given application and compatible with the elastomers used (e.g. seal).

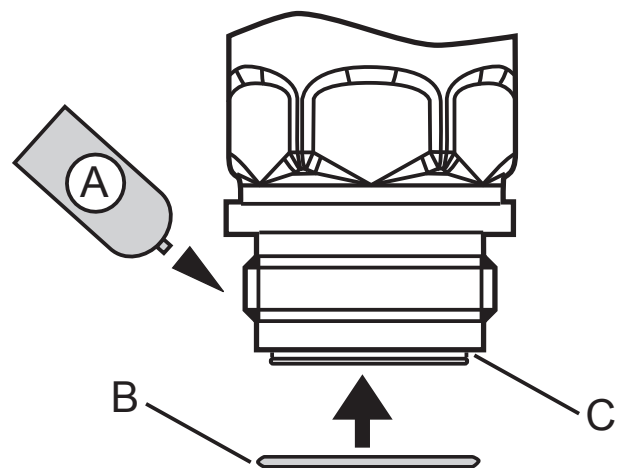


Only use O-rings for sealing.

The inline housing is supplied with an EPDM O-ring; order no.E30054. More sealing rings are available as accessories: FKM O-ring, order no. E30123.

- ▶ Remove protective packaging only just before mounting.
- ▶ Ensure cleanliness of the sealing areas.

- ▶ Place the sealing ring (B) in the groove (C) of the sensor.
- ▶ Use lubricating paste (A) sparingly and apply to threaded parts.



- ▶ Tighten the sensor using a spanner until you can feel the end stop (this corresponds to a maximum tightening torque of approx. 35 Nm).



Too much torque may impair the seal.



If the sealing area is damaged:

- ▶ Replacing the inline adapter.

5 Set-up

- ▶ Before set-up, check the pipe for ingress resistance.
- ▶ Set-up of the sensor: → Operating instructions of the sensor.

More information at www.ifm.com